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Appln. No. 10/423,128
Amendment dated August 20, 2007
Reply to Office Action mailed May 16, 2007

REMARKS

Reconsideration is respectfully requested.

Claims 1, 4 through 11, and 13 through 28 remain in this application. Claims 2, 3, and 12 have been cancelled. No claims have been withdrawn. Claims 29 through 31 have been added.

Claims 1 through 7, 9 through 15, 17 through 21 and 23 through 28 have been rejected under 35 U.S.C. 102(b) as being anticipated by Lin (U.S. Patent No. 6,862,695). This rejection is respectfully traversed.

Claim 1 recites an apparatus for detecting and indicating faults on a computer motherboard comprising "wherein said microprocessor is configured by said plurality of diagnostic instructions to:" "first turn on a visual indicator when power is applied to said computer motherboard", "execute a first portion of said plurality of diagnostic instructions so as to detect faults on said computer motherboard", and "second turn off said visual indicator when no faults on said computer motherboard are detected during execution of said diagnostic instructions".

Claim 11 recites a method for detecting and indicating that there are no faults on a computer motherboard, including,

"requesting and retrieving said diagnostic instructions, and first executing a first portion of said diagnostic instructions so as to detect faults on said computer motherboard, responsive to reception of said initialization signal", "turning off said visual indicator when no faults on said computer motherboard are detected during execution of said diagnostic instructions", "initializing a memory subsystem", "second executing a second portion of said diagnostic instructions so as to detect faults in said memory subsystem" and "flashing said visual indicator when a fault is found on said memory subsystem".

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Claim 19 requires, in part, "means for turning on a visual indicator when power is applied to said computer motherboard" and "means for turning off said visual indicator when no fault is found on said computer motherboard during execution of said diagnostic instructions".

The Office Action alleges that claim 11 "recites the limitations found in claims 1 and 2, with the addition of 'turning off said visual indicator when no faults on the computer motherboard are detected during execution of said diagnostic instructions.'" Further, the Office Action states that "Lin uses a flashing LED as an indicator of component failure during a POST (as shown in Figures 5a and 5b). Eventually, the POST will complete (element 513 of Figure 5b). As shown in Figures 5a and 5b, when the POST completes without failure in any component, the testing has ceased and the LED will *not* indicate any more test results. Thus, the 'indicator' characteristic of the LED ceases."

It is respectfully submitted that Lin does not teach or suggest the steps recited in claim 11 because Lin does not teach or suggest turning a visual indicator on, and then turning the visual indicator off when no faults are detected. Further, it is respectfully submitted that the "ceasing of the 'indicator' characteristic of the LED" is not a teaching of turning a visual indicator "off," as recited in claim 11, particularly since the teaching of the Lin reference is that the LED is a "power LED" used to indicate that the computer has power and is running, as is discussed below.

The Office Action suggests that Lin discloses the step of turning a visual indicator on when power is applied to the computer motherboard at column 3, line 65 through column 4, line 1. The cited passage states:

The LED 36 preferably comprises a power LED inherently mounted on the computer casing which is used to indicate the power status of the computer 30...

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However, if the Office Action construes the "power LED ... which is used to indicate the power status of the computer 30 ..." as the "visual indicator" that is turned on when power is applied to the motherboard, as required by claim 11, then when the POST is completed in the Lin system without any failure in any component, the power LED will remain "on" and not be turned "off" (again, as required by claim 11) as this would be inconsistent with the "power LED" function of the Lin LED. It is respectfully submitted that the feature of "turning off said visual indicator when no faults on said computer motherboard are detected," as recited by claim 11 is not the same as the Lin power LED, as one viewing the power LED would not be able to distinguish a point at which the LED is indicating test results, and at what point the Lin power LED "ceases to indicate any more test results," as suggested in the rejection. Therefore, the Lin reference does not anticipate the steps of claim 11.

Instead, Lin is clear that the power LED remains illuminated as a power on indicator as long as the power is "on", and only provides an indication of an error condition if an error condition is detected, and the power LED is flashed. Thus, the power LED is never changed to an off state until the computer itself is changed to an off state, and that extinguishment is not an indication of a lack of an error. An extinguishment of the power LED of Lin would negate its power LED indication function.

Claims 13 through 15 and 17 through 18 depend from claim 11 and are allowable for at least the reasons provided in support of the allowability of claim 11.

Claims 19 through 21 and 23 through 25 are rejected on the same grounds as claims 11 through 15 and 17. Thus, 19 through 21 and 23 through 25 are allowable for at least the reasons provided with respect to claims 11 through 15 and 17.

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Claim 26 recites an apparatus for detecting and indicating faults on a computer motherboard and in a memory subsystem of a computer system, including, "a microprocessor coupled to a host bus, to a general I/O port, and to a flash circuit, the microprocessor turning the visual indicator on through said general I/O port and requesting and retrieving a plurality of diagnostic instructions upon reception of an initialization signal to start said computer system, executing the diagnostic instructions for detecting faults in the computer motherboard prior to executing said diagnostic instructions for detecting faults in said memory subsystem, turning said visual indicator off if no faults are detected in said computer motherboard, and activating said flash circuit if faults are detected in said memory subsystem" (emphasis added).

It is respectfully submitted, for the reasons provided above with respect to claims 1 and 11, that the Lin reference does not teach or suggest 1) a microprocessor turning a visual indicator on through a general I/O port, or 2) a microprocessor turning the visual indicator off if no faults are detected in a computer motherboard. Further, it is respectfully submitted that the Lin reference does not teach or suggest the operation of the visual indicator with respect to diagnostic testing of a computer motherboard because the Lin reference is only concerned with testing other hardware devices (namely, a RAM device, a BIOS memory, and a display adapter (col. 3, lines 15 – 17)). Thus, the Lin reference does not teach or suggest executing diagnostic instructions for detecting faults in a computer motherboard prior to executing diagnostic instructions for detecting faults in a memory subsystem (i.e. a RAM device).

Claims 27 and 28 depend from claim 26, and, therefore, are allowable for at least the reasons provided with respect to claim 26.

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Claims 8, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of BOXX Box Boxes Clever. The rejection is respectfully traversed.

Claims 8, 16 and 22 depend from claims 1, 11 and 19, respectively. It is respectfully submitted that BOXX Box Boxes Clever does not make up the deficiencies discussed above with respect to claims 1, 11 and 19, and, therefore, claims 8, 16 and 22 are also allowable for at least the reasons provided in support of the allowability of claims 1, 11 and 19.

Withdrawal of the §103(a) rejection of claims 1, 4 through 11, and 13 through 28 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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